Social Engineering Attacks Inference Rules

Shoulder Surfing

- attack(shoulder_surfing,r1,A2,a)←ownership(r2,a)∧play(A2,r2)∧play(attacker,r1)∧has security awareness(A2,h)∧scene(r2,h)
- attack(shoulder_surfing,r1,A2,a)←ownership(r2,a)∧play(A2,r2)∧play(attacker,r1)∧has_security_awareness(A2,h)∧scene(r2,l)
- attack(shoulder_surfing,r1,A2,a)←ownership(r2,a)∧play(A2,r2)∧play(attacker,r1)∧has security awareness(A2,m)∧scene(r2,h)
- attack(shoulder_surfing,r1,A2,a)←ownership(r2,a)∧play(A2,r2)∧play(attacker,r1)∧has_security_awareness(A2,m)∧scene(r2,l)
- attack(shoulder_surfing,r1,A2,a)←ownership(r2,a)∧play(A2,r2)∧play(atta cker,r1)∧has security awareness(A2,l)∧(scene(r2,h)vscene(r2,l))

Tailgating

- attack(tailgating,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧mandatory_S_p (r2,Ma,a,Y)∧has security awareness(A2,h)∧(scene(r2,h)∨scene(r2,l))
- attack(tailgating,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧mandatory_S_p (r2,Ma,a,Y)∧has_security_awareness(A2,m)∧scene(r2,h)
- attack(tailgating,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧mandatory_S_p (r2,Ma,a,Y)∧has security awareness(A2,m)∧scene(r2,l)
- attack(tailgating,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧mandatory_S_p (r2,Ma,a,Y)∧has_security_awareness(A2,l)∧scene(r2,h)
- attack(tailgating,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧mandatory_S_p (r2,Ma,a,Y)∧has_security_awareness(A2,l)∧scene(r2,l)
- attack(tailgating,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧mandatory_disq ualification_S_p(r2,Ma,a)∧has_security_awareness(A2,h)∧(scene(r2,h)∨sc ene(r2,l))
- attack(tailgating,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧mandatory_disq ualification_S_p(r2,Ma,a)∧has_security_awareness(A2,m)∧(scene(r2,h)vs cene(r2,l))
- attack(tailgating,r1,A2,a)←play(A2,r2) \(\Lambda \) play(attacker,r1) \(\Lambda \) mandatory_disq ualification_S_p(r2,Ma,a) \(\Lambda \) has_security_awareness(A2,l) \(\Lambda \) (scene(r2,h) \(\mathbf{v} \) scene(r2,l))

Dumpster Diving

- attack(dumpster_diving,r1,A2,a)←ownership(r2,a)∧play(A2,r2)∧play(attacker,r1)∧scene(r2,h)∧has security awareness(A2,h)
- attack(dumpster_diving,r1,A2,a)←ownership(r2,a)∧play(A2,r2)∧play(atta cker,r1)∧scene(r2,l)∧has security awareness(A2,h)
- attack(dumpster_diving,r1,A2,a)←ownership(r2,a)∧play(A2,r2)∧play(atta cker,r1)∧scene(r2,h)∧has security awareness(A2,m)
- attack(dumpster_diving,r1,A2,a)
 —ownership(r2,a) \(\text{play}(A2,r2) \(\text{play}(atta \) cker,r1) \(\text{\(\text{NSCene}(r2,l) \(\text{\(\text{has} \) security_awareness(A2,m)} \)
- attack(dumpster_diving,r1,A2,a)←ownership(r2,a)∧play(A2,r2)∧play(atta cker,r1)∧(scene(r2,h)∨scene(r2,l))∧has security awareness(A2,l)

Intimidation

- attack(intimidation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^(scene(r2,h))
 vscene(r2,l))^mandatory_disqualification_S_p(r2,S,a)^mandatory_disqualification_S_n(r1,S,a)^subordinate(r1,r2)^has security awareness(A2,h)
- attack(intimidation,r1,A2,a)←play(A2,r2) ∧ play(attacker,r1) ∧ (scene(r2,h) vscene(r2,l)) ∧ mandatory_S_p(r2,S,a,Y) ∧ mandatory_disqualification_S_n(r1,S,a) ∧ subordinate(r1,r2) ∧ has security awareness(A2,h)
- attack(intimidation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^(scene(r2,h))
 vscene(r2,l))^mandatory_disqualification_S_p(r2,S,a)^mandatory_S_n(r1,S,a,Y)^subordinate(r1,r2)^has_security_awareness(A2,h)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) Vscene(r2,l))Λmandatory_S_p(r2,S,a,Y)Λmandatory_S_n(r1,S,a,Y)Λsubord inate(r1,r2)Λhas security awareness(A2,h)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land (scene(r2,h) \lor scene(r2,l)) \land mandatory_disqualification_S_p(r2,S,a) \land mandatory_disqualification_S_n(r1,S,a) \land subordinate(r1,r2) \land has_security_awareness(A2,m)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land (scene(r2,h) \lor scene(r2,l)) \land mandatory_S_p(r2,S,a,Y) \land mandatory_disqualification_S_n(r1,S,a) \land subordinate(r1,r2) \land has_security_awareness(A2,m)
- attack(intimidation,r1,A2,a)—play(A2,r2) \(\text{play}(\text{attacker,r1} \) \(\text{scene}(r2,h) \)
 \(\text{vscene}(r2,l) \) \(\text{mandatory_disqualification_S_p(r2,S,a)} \) \(\text{mandatory_S_n(r1,S,a,Y)} \) \(\text{vsubordinate}(r1,r2) \(\text{has security awareness}(A2,m) \)
- attack(intimidation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^(scene(r2,h))
 vscene(r2,l))^mandatory_S_p(r2,S,a,Y)^mandatory_S_n(r1,S,a,Y)^subord inate(r1,r2)^has_security_awareness(A2,m)
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ (scene(r2,h) vscene(r2,l)) ∧ mandatory_disqualification_S_p(r2,S,a) ∧ mandatory_disqualification_S n(r1,S,a) ∧ authority(r1,r2) ∧ has security awareness(A2,h)

- attack(intimidation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^(scene(r2,h))
 vscene(r2,l))^mandatory_S_p(r2,S,a,Y)^mandatory_disqualification_S_n(r1,S,a)^authority(r1,r2)^has_security_awareness(A2,h)
- attack(intimidation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^(scene(r2,h))
 vscene(r2,l))^mandatory_disqualification_S_p(r2,S,a)^mandatory_S_n(r1,S,a,Y)^authority(r1,r2)^has_security_awareness(A2,h)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land mandatory_S_p(r2,S,a,Y) \land mandatory_S_n(r1,S,a,Y) \land authority(r1,r2) \land has security awareness(A2,h)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,h) Λ mandatory_S_p(r2,S,a,Y) Λ mandatory_S_n(r1,S,a,Y) Λ authority(r1,r2) Λ has security awareness(A2,h)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h)
 νscene(r2,l))Λmandatory_disqualification_S_p(r2,S,a)Λmandatory_disqua
 lification S n(r1,S,a)Λauthority(r1,r2)Λhas security awareness(A2,m)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) vscene(r2,l))Λmandatory_S_p(r2,S,a,Y)Λmandatory_disqualification_S_n(r1,S,a)Λauthority(r1,r2)Λhas_security_awareness(A2,m)
- attack(intimidation,r1,A2,a)←play(A2,r2) \(\n \) play(attacker,r1) \(\n \) (scene(r2,h)
 \(\n \) vscene(r2,l) \(\n \) mandatory_disqualification_S_p(r2,S,a) \(\n \) mandatory_S_n(r1,S,a,Y) \(\n \) authority(r1,r2) \(\n \) has security awareness(A2,m)
- attack(intimidation,r1,A2,a)←play(A2,r2) \(\triangle \) play(attacker,r1) \(\triangle \) scene(r2,l) \(\triangle \) mandatory_S_p(r2,S,a,Y) \(\triangle \) mandatory_S_n(r1,S,a,Y) \(\triangle \) authority(r1,r2) \(\triangle \) has security awareness(A2,m)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,h) \land mandatory_S_p(r2,S,a,Y) \land mandatory_S_n(r1,S,a,Y) \land authority(r1,r2) \land has security awareness(A2,m)
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ (scene(r2,h) vscene(r2,l)) ∧ (mandatory_disqualification_S_p(r2,S,a) v mandatory_S_p(r2,S,a,Y)) ∧ (mandatory_S_n(r1,S,a,Y) v mandatory_disqualification_S_n(r1,S,a)) ∧ (subordinate(r1,r2) vauthority(r1,r2)) ∧ has security awareness(A2,l)
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ (scene(r2,l) ∨ scene(r2,h)) ∧ uncertain_constraint(r1,a) ∧ mandatory_disqualification_S_p(r2,S,a) ∧ has_security_awareness(A2,h) ∧ subordinate(r1,r2)
- attack(intimidation,r1,A2,a)—play(A2,r2) \(\triangle play(attacker,r1) \(\triangle scene(r2,l) \(\triangle u \)
 ncertain_constraint(r1,a) \(\triangle mandatory_S_p(r2,S,a,Y) \(\triangle has_security_awaren \)
 ess(A2,h) \(\triangle subordinate(r1,r2) \)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,h) \land uncertain_constraint(r1,a) \land mandatory_S_p(r2,S,a,Y) \land has_security_aware ness(A2,h) \land subordinate(r1,r2)
- attack(intimidation,r1,A2,a)—play(A2,r2)^play(attacker,r1)^(scene(r2,l)v scene(r2,h))^uncertain_constraint(r1,a)^mandatory_disqualification_S_p(r2,S,a)^has_security_awareness(A2,m)^subordinate(r1,r2)

- attack(intimidation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^scene(r2,l)^u ncertain_constraint(r1,a)^mandatory_S_p(r2,S,a,Y)^has_security_awaren ess(A2,m)^subordinate(r1,r2)
- attack(intimidation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)∧ uncertain_constraint(r1,a)∧mandatory_S_p(r2,S,a,Y)∧has_security_aware ness(A2,m)∧subordinate(r1,r2)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,l) Λu ncertain_constraint(r1,a) Λ(mandatory_S_p(r2,S,a,Y) ν mandatory_disquali fication S p(r2,S,a)) Λhas security awareness(A2,h) Λauthority(r1,r2)
- attack(intimidation,r1,A2,a)—play(A2,r2) Λ play(attacker,r1) Λ scene(r2,h) Λ uncertain_constraint(r1,a) Λ (mandatory_S_p(r2,S,a,Y) ν mandatory_disqual ification S p(r2,S,a)) Λ has security awareness(A2,h) Λ authority(r1,r2)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,l) Λu ncertain_constraint(r1,a) Λ(mandatory_S_p(r2,S,a,Y) ν mandatory_disquali fication S p(r2,S,a)) Λhas security awareness(A2,m) Λauthority(r1,r2)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,h) \land uncertain_constraint(r1,a) \land (mandatory_S_p(r2,S,a,Y) \lor mandatory_disqual ification_S_p(r2,S,a)) \land has_security_awareness(A2,m) \land authority(r1,r2)
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ (scene(r2,l) ∨ scene(r2,h)) ∧ uncertain_constraint(r1,a) ∧ (mandatory_S_p(r2,S,a,Y) ∨ mand atory_disqualification_S_p(r2,S,a)) ∧ has_security_awareness(A2,l) ∧ (subor dinate(r1,r2) ∨ authority(r1,r2))
- attack(intimidation,r1,A2,a)—play(A2,r2) \(\text{play}(\text{attacker,r1} \) \(\text{(scene(r2,l) V} \) \(\text{scene(r2,h)} \) \(\text{mandatory_disqualification_S_n(r1,S,a)} \) \(\text{mandatory_disqualification_S_p(r2,S,a)} \) \(\text{trust(A2,r1)} \(\text{\lambda subordinate(r1,r2)} \) \(\text{\lambda has_security_aware ness(A2,h)} \)
- attack(intimidation,r1,A2,a)-play(A2,r2) λplay(attacker,r1) λscene(r2,l) λ mandatory_S_n(r1,S,a,Y) λ mandatory_disqualification_S_p(r2,S,a) λtrust(A2,r1) λsubordinate(r1,r2) λ has security awareness(A2,h)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,h) \land mandatory_S_n(r1,S,a,Y) \land mandatory_disqualification_S_p(r2,S,a) \land trust(A2,r1) \land subordinate(r1,r2) \land has_security_awareness(A2,h)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land mandatory_disqualification_S_n(r1,S,a) \land mandatory_S_p(r2,S,a,Y) \land trust(A2,r1) \land subordinate(r1,r2) \land has_security_awareness(A2,h)
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ scene(r2,h) ∧ mandatory_disqualification_S_n(r1,S,a) ∧ mandatory_S_p(r2,S,a,Y) ∧ trust(A2,r1) ∧ subordinate(r1,r2) ∧ has_security_awareness(A2,h)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land mandatory_S_n(r1,S,a,Y) \land mandatory_S_p(r2,S,a,Y) \land trust(A2,r1) \land subordinate(r1,r2) \land has_security_awareness(A2,h)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λscene(r2,h)Λ mandatory_S_n(r1,S,a,Y)Λmandatory_S_p(r2,S,a,Y)Λtrust(A2,r1)Λsubordi nate(r1,r2)Λhas security awareness(A2,h)

- attack(intimidation,r1,A2,a)—play(A2,r2) \(\triangle play(attacker,r1) \(\triangle (cene(r2,l) \) \\ scene(r2,h) \(\triangle mandatory_disqualification_S_n(r1,S,a) \) \(\triangle mandatory_disqualification_S_p(r2,S,a) \) \(\triangle trust(A2,r1) \(\triangle subordinate(r1,r2) \) \(\triangle has_security_aware ness(A2,m) \)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,l) V scene(r2,h)) Λmandatory_S_n(r1,S,a,Y)Λmandatory_disqualification_S_p(r 2,S,a)Λtrust(A2,r1)Λsubordinate(r1,r2)Λhas_security_awareness(A2,m)
- attack(intimidation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,l)v scene(r2,h))∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧trust(A2,r1)∧subordinate(r1,r2)∧has security awareness(A2,m)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,l) Λ mandatory_S_n(r1,S,a,Y) Λmandatory_S_p(r2,S,a,Y) Λtrust(A2,r1) Λsubordi nate(r1,r2) Λhas security awareness(A2,m)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,h) \land mandatory_S_n(r1,S,a,Y) \land mandatory_S_p(r2,S,a,Y) \land trust(A2,r1) \land subordinate(r1,r2) \land has_security_awareness(A2,m)
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ (scene(r2,l) ∨ scene(r2,h)) ∧ (mandatory_S_p(r1,S,a,Y) ∨ mandatory_disqualification_S_n(r1,S,a)) ∧ (mandatory_S_p(r2,S,a,Y) ∨ mandatory_disqualification_S_p(r2,S,a)) ∧ trust(A2,r1) ∧ subordinate(r1,r2) ∧ has security awareness(A2,l)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land mandatory_disqualification_S_n(r1,S,a) \land mandatory_disqualification_S_p(r2,S,a) \land trust(A2,r1) \land authority(r1,r2) \land has_security_awareness(A2,h)
- attack(intimidation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^scene(r2,h)^ mandatory_disqualification_S_n(r1,S,a)^mandatory_disqualification_S_p(r2,S,a)^trust(A2,r1)^authority(r1,r2)^has_security_awareness(A2,h)
- attack(intimidation,r1,A2,a)—play(A2,r2) Λ play(attacker,r1) Λ scene(r2,l) Λ mandatory_S_n(r1,S,a,Y) Λ mandatory_disqualification_S_p(r2,S,a) Λ trust(A2,r1) Λ authority(r1,r2) Λ has security awareness(A2,h)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,h) \land mandatory_S_n(r1,S,a,Y) \land mandatory_disqualification_S_p(r2,S,a) \land trust(A2,r1) \land authority(r1,r2) \land has_security_awareness(A2,h)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land mandatory_disqualification_S_n(r1,S,a) \land mandatory_S_p(r2,S,a,Y) \land trust(A2,r1) \land authority(r1,r2) \land has_security_awareness(A2,h)
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ scene(r2,h) ∧ mandatory_disqualification_S_n(r1,S,a) ∧ mandatory_S_p(r2,S,a,Y) ∧ trust(A2,r1) ∧ authority(r1,r2) ∧ has_security_awareness(A2,h)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land (scene(r2,l) \lor scene(r2,h)) \land mandatory_S_n(r1,S,a,Y) \land mandatory_S_p(r2,S,a,Y) \land trust(A2,r1) \land authority(r1,r2) \land has_security_awareness(A2,h)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,l) Λ mandatory_disqualification_S_n(r1,S,a) Λ mandatory_disqualification_S_p(r2,S,a) Λtrust(A2,r1) Λ authority(r1,r2) Λ has security awareness(A2,m)

- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,h) Λ mandatory_disqualification_S_n(r1,S,a) Λ mandatory_disqualification_S_p(r2,S,a) Λtrust(A2,r1) Λauthority(r1,r2) Λhas security awareness(A2,m)
- attack(intimidation,r1,A2,a)—play(A2,r2) Λ play(attacker,r1) Λ scene(r2,l) Λ mandatory_S_n(r1,S,a,Y) Λ mandatory_disqualification_S_p(r2,S,a) Λ trust(A2,r1) Λ authority(r1,r2) Λ has security awareness(A2,m)
- attack(intimidation,r1,A2,a)—play(A2,r2) Λ play(attacker,r1) Λ scene(r2,h) Λ mandatory_S_n(r1,S,a,Y) Λ mandatory_disqualification_S_p(r2,S,a) Λ trust(A 2,r1) Λ authority(r1,r2) Λ has_security_awareness(A2,m)
- attack(intimidation,r1,A2,a)—play(A2,r2) Λ play(attacker,r1) Λ scene(r2,l) Λ mandatory_disqualification_S_n(r1,S,a) Λ mandatory_S_p(r2,S,a,Y) Λ trust(A2,r1) Λ authority(r1,r2) Λ has security awareness(A2,m)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,h) Λ mandatory_disqualification_S_n(r1,S,a) Λ mandatory_S_p(r2,S,a,Y) Λtrust(A2,r1) Λauthority(r1,r2) Λhas security awareness(A2,m)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land (scene(r2,l) \lor scene(r2,h)) \land mandatory_S_n(r1,S,a,Y) \land mandatory_S_p(r2,S,a,Y) \land trust(A 2,r1) \land authority(r1,r2) \land has_security_awareness(A2,m)
- attack(intimidation,r1,A2,a)—play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,l) ν scene(r2,h)) Λ (mandatory_S_n(r1,S,a,Y) ν mandatory_disqualification_S_n(r1,S,a)) Λ (mandatory_S_p(r2,S,a,Y) ν mandatory_disqualification_S_p(r2,S,a)) Λ trust(A2,r1) Λ authority(r1,r2) Λ has_security_awareness(A2,l)
- attack(intimidation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)∧u ncertain_constraint(r1,a)∧mandatory_disqualification_S_p(r2,S,a)∧subor dinate(r1,r2)∧trust(A2,r1)∧has security awareness(A2,h)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,h) \land uncertain_constraint(r1,a) \land (mandatory_disqualification_S_p(r2,S,a) \lor man datory_S_p(r2,S,a,Y)) \land subordinate(r1,r2) \land trust(A2,r1) \land has_security_awa reness(A2,h)
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ scene(r2,l) ∧ u ncertain_constraint(r1,a) ∧ mandatory_S_p(r2,S,a,Y) ∧ subordinate(r1,r2) ∧ t rust(A2,r1) ∧ has_security_awareness(A2,h)
- attack(intimidation,r1,A2,a)—play(A2,r2)^play(attacker,r1)^scene(r2,l)^u ncertain_constraint(r1,a)^mandatory_disqualification_S_p(r2,S,a)^subor dinate(r1,r2)^trust(A2,r1)^has_security_awareness(A2,m)
- attack(intimidation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^scene(r2,h)^ uncertain_constraint(r1,a)^(mandatory_disqualification_S_p(r2,S,a)^vman datory_S_p(r2,S,a,Y))^subordinate(r1,r2)^trust(A2,r1)^has_security_awa reness(A2,m)
- attack(intimidation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^scene(r2,l)^u ncertain_constraint(r1,a)^mandatory_S_p(r2,S,a,Y)^subordinate(r1,r2)^t rust(A2,r1)^has_security_awareness(A2,m)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land (scene(r2,h) \lor scene(r2,l)) \land uncertain_constraint(r1,a) \land (mandatory_disqualification_S_

- p(r2,S,a) v mandatory_S_p(r2,S,a,Y)) Λ subordinate(r1,r2) Λ trust(A2,r1) Λ has security awareness(A2,l)
- attack(intimidation,r1,A2,a)—play(A2,r2) Λplay(attacker,r1) Λ(scene(r2,h)
 νscene(r2,l)) Λuncertain_constraint(r1,a) Λmandatory_disqualification_S_p
 (r2,S,a) Λauthority(r1,r2) Λtrust(A2,r1) Λhas_security_awareness(A2,h)
- attack(intimidation,r1,A2,a)-play(A2,r2) Λplay(attacker,r1)Λscene(r2,l)Λu ncertain_constraint(r1,a)Λmandatory_S_p(r2,S,a,Y)Λauthority(r1,r2)Λtrus t(A2,r1)Λhas security awareness(A2,h)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λscene(r2,h)Λ uncertain_constraint(r1,a)Λmandatory_S_p(r2,S,a,Y)Λauthority(r1,r2)Λtr ust(A2,r1)Λhas_security_awareness(A2,h)
- attack(intimidation,r1,A2,a) ← play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,h) Vscene(r2,l)) Λ uncertain_constraint(r1,a) Λ (mandatory_disqualification_S_p(r2,S,a) V mandatory_S_p(r2,S,a,Y)) Λ authority(r1,r2) Λ trust(A2,r1) Λ (has_s ecurity awareness(A2,m) V has security awareness(A2,l))
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ (scene(r2,h) vscene(r2,l)) ∧ mandatory_disqualification_S_n(r1,S,a) ∧ uncertain_constrain(r2,a) ∧ generate(t,a) ∧ Non_mandatory_C_p(r2,C,t) ∧ subordinate(r1,r2) ∧ has security awareness(A2,h)
- attack(intimidation,r1,A2,a)←play(A2,r2) \(\triangle \) play(attacker,r1) \(\triangle \) scene(r2,l) \(\triangle \) mandatory_S_n(r1,S,a,Y) \(\triangle \) uncertain_constraint(r2,a) \(\triangle \) generate(t,a) \(\triangle \) Non_mandatory_C_p(r2,C,t) \(\triangle \) subordinate(r1,r2) \(\triangle \) has_security_awareness(A2,h)
)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,h) \land mandatory_S_n(r1,S,a) \land uncertain_constraint(r2,a) \land generate(t,a) \land Non_m andatory_C_p(r2,C,t) \land subordinate(r1,r2) \land has_security_awareness(A2,h)
- attack(intimidation,r1,A2,a) ← play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,h) V scene(r2,l)) Λ mandatory_disqualification_S_n(r1,S,a) Λ uncertain_constraint(r2,a) Λ generate(t,a) Λ Non_mandatory_C_p(r2,C,t) Λ subordinate(r1,r2) Λ has security awareness(A2,m)
- attack(intimidation,r1,A2,a) ~ play(A2,r2) \(\triangle play(attacker,r1) \(\triangle scene(r2,l) \(\triangle mandatory_S_n(r1,S,a,Y) \(\triangle uncertain_constraint(r2,a) \(\triangle generate(t,a) \(\triangle Non_mandatory_C_p(r2,C,t) \(\triangle subordinate(r1,r2) \(\triangle has_security_awareness(A2,m) \)
- attack(intimidation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^scene(r2,h)^ mandatory_S_n(r1,S,a)^uncertain_constraint(r2,a)^generate(t,a)^Non_m andatory_C_p(r2,C,t)^subordinate(r1,r2)^has_security_awareness(A2,m)
- attack(intimidation,r1,A2,a)—play(A2,r2) \(\triangle \) play(attacker,r1) \(\triangle \) (scene(r2,h) \(\triangle \) vscene(r2,l) \(\triangle \) (mandatory_S_n(r1,S,a,Y) \(\triangle \) mandatory_disqualification_S_n(r1,S,a) \(\triangle \) nuncertain_constraint(r2,a) \(\triangle \) generate(t,a) \(\triangle \) Non_mandatory_C_p(r2,C,t) \(\triangle \) subordinate(r1,r2) \(\triangle \) has_security_awareness(A2,l)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,l) Λ(mandatory_disqualification_S_n(r1,S,a)ν mandatory_S_n(r1,S,a,Y) Λuncert

- ain_constraint(r2,a) Λ generate(t,a) Λ Non_mandatory_C_p(r2,C,t) Λ authorit y(r1,r2) Λ has security awareness(A2,h)
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ scene(r2,h) ∧ (mandatory_disqualification_S_n(r1,S,a) ∨ mandatory_S_n(r1,S,a,Y)) ∧ unce rtain_constraint(r2,a) ∧ generate(t,a) ∧ Non_mandatory_C_p(r2,C,t) ∧ author ity(r1,r2) ∧ has security awareness(A2,h)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,l) Λ(
 mandatory_disqualification_S_n(r1,S,a) ν mandatory_S_n(r1,S,a,Y) Λ uncert
 ain_constraint(r2,a) Λ generate(t,a) Λ Non_mandatory_C_p(r2,C,t) Λ authorit
 y(r1,r2) Λ has security awareness(A2,m)
- attack(intimidation,r1,A2,a)←play(A2,r2) \(\text{play}(\) attacker,r1) \(\text{\chick} \) scene(r2,h) \(\text{(mandatory_disqualification_S_n(r1,S,a) \(\text{vmandatory_S_n(r1,S,a,Y)} \) \(\text{\chick} \) unce rtain_constraint(r2,a) \(\text{\chick} \) generate(t,a) \(\text{\chick} \) Non_mandatory_C_p(r2,C,t) \(\text{\chick} \) author ity(r1,r2) \(\text{\chick} \) has_security_awareness(A2,m)
- attack(intimidation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^(scene(r2,h))
 vscene(r2,l))^(mandatory_disqualification_S_n(r1,S,a)vmandatory_S_n(r1,S,a,Y))^nuncertain_constraint(r2,a)^generate(t,a)^nuncertain_constraint(r2,a)^generate(t,a)^nuncertain_constraint(r2,a)^generate(t,a)^nuncertain_constraint(r2,a)^generate(t,a)^nuncertain_constraint(r2,a)^generate(t,a)^nuncertain_constraint(r2,a)^generate(t,a)^nuncertain_constraint(r2,a)^generate(t,a)^nuncertain_constraint(r2,a)^generate(t,a)^nuncertain_constraint(r2,a)^generate(t,a)^genera
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ (scene(r2,l) ∨ scene(r2,h)) ∧ uncertain_constraint(r1,a) ∧ uncertain_constraint(r2,a) ∧ gene rate(t,a) ∧ Non_mandatory_C_p(r2,C,t) ∧ subordinate(r1,r2) ∧ has_security_a wareness(A2,h)
- attack(intimidation,r1,A2,a)—play(A2,r2) \(\triangle \) play(attacker,r1) \(\triangle \) (scene(r2,l) \(\triangle \) scene(r2,h)) \(\triangle \) uncertain_constraint(r1,a) \(\triangle \) uncertain_constraint(r2,a) \(\triangle \) gene rate(t,a) \(\triangle \) Non_mandatory_C_p(r2,C,t) \(\triangle \) subordinate(r1,r2) \(\triangle \) has_security_a wareness(A2,m)
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ (scene(r2,l) ∨ scene(r2,h)) ∧ uncertain_constraint(r1,a) ∧ uncertain_constraint(r2,a) ∧ gene rate(t,a) ∧ Non_mandatory_C_p(r2,C,t) ∧ subordinate(r1,r2) ∧ has_security_a wareness(A2,l)
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ scene(r2,l) ∧ uncertain_constraint(r1,a) ∧ uncertain_constraint(r2,a) ∧ generate(t,a) ∧ Non_mandatory C p(r2,C,t) ∧ authority(r1,r2) ∧ has security awareness(A2,h)
- attack(intimidation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,h) \land uncertain_constraint(r1,a) \land uncertain_constraint(r2,a) \land generate(t,a) \land No n_mandatory_C_p(r2,C,t) \land authority(r1,r2) \land has_security_awareness(A2,h)
- attack(intimidation,r1,A2,a)←play(A2,r2) \(\text{play}(\) attacker,r1) \(\text{\Lambda} \) scene(r2,l) \(\text{\Lambda} \) ncertain_constraint(r1,a) \(\text{\Lambda} \) uncertain_constraint(r2,a) \(\text{\Lambda} \) generate(t,a) \(\text{\Lambda} \) Non_mandatory_C_p(r2,C,t) \(\text{\Lambda} \) authority(r1,r2) \(\text{\Lambda} \) has_security_awareness(A2,m)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λ play(attacker,r1) Λ scene(r2,h) Λ uncertain_constraint(r1,a) Λ uncertain_constraint(r2,a) Λ generate(t,a) Λ No n_mandatory_C_p(r2,C,t) Λ authority(r1,r2) Λ has_security_awareness(A2,m)

attack(intimidation,r1,A2,a)—play(A2,r2) \(\triangle \) play(attacker,r1) \(\triangle \) (scene(r2,l) \(\triangle \) scene(r2,h)) \(\triangle \) uncertain_constraint(r1,a) \(\triangle \) uncertain_constraint(r2,a) \(\triangle \) gene rate(t,a) \(\triangle \) Non_mandatory_C_p(r2,C,t) \(\triangle \) authority(r1,r2) \(\triangle \) has_security_awa reness(A2,l)

•

- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,l) Λ(
 mandatory_disqualification_S_n(r1,S,a) ν mandatory_S_n(r1,S,a,Y)) Λ uncer
 tain_constraint(r2,a) Λgenerate(t,a) Λ Non_mandatory_C_p(r2,C,t) Λsubordi
 nate(r1,r2) Λtrust(A2,r1) Λhas security awareness(A2,h)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,h) Λ (mandatory_disqualification_S_n(r1,S,a) ν mandatory_S_n(r1,S,a,Y)) Λ unce rtain_constraint(r2,a) Λgenerate(t,a) Λ Non_mandatory_C_p(r2,C,t) Λsubord inate(r1,r2) Λtrust(A2,r1) Λhas security awareness(A2,h)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,l) Λ(
 mandatory_disqualification_S_n(r1,S,a) ν mandatory_S_n(r1,S,a,Y)) Λ uncer
 tain_constraint(r2,a) Λgenerate(t,a) Λ Non_mandatory_C_p(r2,C,t) Λsubordi
 nate(r1,r2) Λtrust(A2,r1) Λ has security awareness(A2,m)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,h) Λ (mandatory_disqualification_S_n(r1,S,a) ν mandatory_S_n(r1,S,a,Y)) Λ unce rtain_constraint(r2,a) Λgenerate(t,a) Λ Non_mandatory_C_p(r2,C,t) Λsubord inate(r1,r2) Λtrust(A2,r1) Λhas security awareness(A2,m)
- attack(intimidation,r1,A2,a)—play(A2,r2) \(\triangle play(attacker,r1) \(\triangle (cene(r2,l) \) \\ scene(r2,h) \(\triangle (mandatory_disqualification_S_n(r1,S,a) \) \(\triangle mandatory_S_n(r1,S,a,Y) \) \(\triangle (mandatory_c) \(\triangle (cenerate(t,a) \) \(\triangle Non_mandatory_C_p(r2,t) \) \(\triangle (cenerate(t,a) \) \(\triangle (cenerate(t,a)

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- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ scene(r2,l) ∧ mandatory_disqualification_S_n(r1,S,a) ∧ uncertain_constraint(r2,a) ∧ gene rate(t,a) ∧ Non_mandatory_C_p(r2,C,t) ∧ authority(r1,r2) ∧ trust(A2,r1) ∧ has_ security awareness(A2,h)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λ play(attacker,r1) Λ scene(r2,l) Λ mandatory_S_n(r1,S,a,Y) Λ uncertain_constraint(r2,a) Λ generate(t,a) Λ Non_mandatory_C_p(r2,C,t) Λ authority(r1,r2) Λ trust(A2,r1) Λ has_security_awar eness(A2,h)
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ scene(r2,h) ∧ (mandatory_disqualification_S_n(r1,S,a) ∨ mandatory_S_n(r1,S,a,Y)) ∧ unce rtain_constraint(r2,a) ∧ generate(t,a) ∧ Non_mandatory_C_p(r2,C,t) ∧ author ity(r1,r2) ∧ trust(A2,r1) ∧ has security awareness(A2,h)
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ scene(r2,l) ∧ mandatory_disqualification_S_n(r1,S,a) ∧ uncertain_constraint(r2,a) ∧ gene rate(t,a) ∧ Non_mandatory_C_p(r2,C,t) ∧ authority(r1,r2) ∧ trust(A2,r1) ∧ has_ security awareness(A2,m)
- attack(intimidation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,l) Λ
 mandatory_S_n(r1,S,a,Y) Λuncertain_constraint(r2,a) Λgenerate(t,a) ΛNon_

- $mandatory_C_p(r2,C,t) \land authority(r1,r2) \land trust(A2,r1) \land has_security_awar eness(A2,m)$
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ scene(r2,h) ∧ (mandatory_disqualification_S_n(r1,S,a) ∨ mandatory_S_n(r1,S,a,Y)) ∧ unce rtain_constraint(r2,a) ∧ generate(t,a) ∧ Non_mandatory_C_p(r2,C,t) ∧ author ity(r1,r2) ∧ trust(A2,r1) ∧ has security awareness(A2,m)
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ (scene(r2,h) vscene(r2,l)) ∧ (mandatory_disqualification_S_n(r1,S,a) v mandatory_S_n(r1,S,a,Y)) ∧ uncertain_constraint(r2,a) ∧ generate(t,a) ∧ Non_mandatory_C_p(r2,C,t) ∧ authority(r1,r2) ∧ trust(A2,r1) ∧ has security awareness(A2,l)
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ (scene(r2,l) ∨ scene(r2,h)) ∧ uncertain_constraint(r1,a) ∧ uncertain_constraint(r2,a) ∧ gene rate(t,a) ∧ Non_mandatory_C_p(r2,C,t) ∧ subordinate(r1,r2) ∧ trust(A2,r1) ∧ h as security awareness(A2,h)
- attack(intimidation,r1,A2,a)—play(A2,r2) \(\triangle \) play(attacker,r1) \(\triangle \) (scene(r2,l) \(\triangle \) scene(r2,h)) \(\triangle \) uncertain_constraint(r1,a) \(\triangle \) uncertain_constraint(r2,a) \(\triangle \) gene rate(t,a) \(\triangle \) Non_mandatory_C_p(r2,C,t) \(\triangle \) subordinate(r1,r2) \(\triangle \) trust(A2,r1) \(\triangle \) (has security awareness(A2,m) \(\triangle \) has security awareness(A2,l))
- attack(intimidation,r1,A2,a)←play(A2,r2) \(\text{play}(\) attacker,r1) \(\text{\Lambda} \) scene(r2,l) \(\text{\Lambda} \) ncertain_constraint(r1,a) \(\text{\Lambda} \) uncertain_constraint(r2,a) \(\text{\Lambda} \) generate(t,a) \(\text{\Lambda} \) Non_mandatory_C_p(r2,C,t) \(\text{\Lambda} \) authority(r1,r2) \(\text{\Lambda} \) trust(A2,r1) \(\text{\Lambda} \) has_security_awar eness(A2,h)
- attack(intimidation,r1,A2,a) ~ play(A2,r2) \(\triangle \) play(attacker,r1) \(\triangle \) scene(r2,h) \(\triangle \) uncertain_constraint(r1,a) \(\triangle \) uncertain_constraint(r2,a) \(\triangle \) generate(t,a) \(\triangle \) No \(n_mandatory_C_p(r2,C,t) \(\triangle \) authority(r1,r2) \(\triangle \) trust(A2,r1) \(\triangle \) has_security_aw \(\triangle \) areness(A2,h)
- attack(intimidation,r1,A2,a) ← play(A2,r2) ∧ play(attacker,r1) ∧ (scene(r2,l) ∨ scene(r2,h)) ∧ uncertain_constraint(r1,a) ∧ uncertain_constraint(r2,a) ∧ gene rate(t,a) ∧ Non_mandatory_C_p(r2,C,t) ∧ authority(r1,r2) ∧ trust(A2,r1) ∧ (has security awareness(A2,m) ∨ has security awareness(A2,l))

Incentive

- attack(incentive,r1,A2,a)←play(A2,r2) \(\text{play}(\) attacker,r1) \(\text{\chi} \) scene(r2,h) \(\text{\chi}(m) \) and atory_S_n(r1,S,a,Y) \(\text{\chi} \) mandatory_disqualification_S_n(r1,S,a) \(\text{\chi} \) has_security_awareness(A2,h)
- attack(incentive,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)∧man datory_S_n(r1,S,a,Y)∧mandatory_S_p(r2,S,a,Y)∧has_security_awareness(A2,h)
- attack(incentive,r1,A2,a)—play(A2,r2) \(\text{play}(\text{attacker,r1} \) \(\text{scene}(r2,l) \(\text{man} \)
 datory_disqualification_S_n(r1,S,a) \(\text{mandatory_S_p(r2,S,a)} \(\text{has_security} \)
 awareness(A2,h)

- attack(incentive,r1,A2,a)—play(A2,r2) \(\text{play}(\text{attacker,r1}) \(\text{scene}(r2,l) \(\text{man} \)
 datory_S_n(r1,S,a,Y) \(\text{mandatory_disqualifcation_S_p(r2,S,a)} \(\text{has_securit } \)
 y \(\text{awareness}(A2,h) \)
- attack(incentive,r1,A2,a)—play(A2,r2) \(\triangle \) play(attacker,r1) \(\triangle \) scene(r2,l) \(\triangle \) man datory_disqualifcation_S_n(r1,S,a) \(\triangle \) mandatory_disqualifcation_S_p(r2,S,a) \(\triangle \) has security awareness(A2,h)
- attack(incentive,r1,A2,a)←play(A2,r2) \(\text{play}(\) attacker,r1) \(\text{\chi} scene(r2,h) \(\text{\chi} (m) \)
 andatory_S_n(r1,S,a,Y) \(\text{v} mandatory_disqualification_S_n(r1,S,a) \(\text{\chi} \) \(\text{\chi} mandatory_disqualification_S_n(r2,S,a) \(\text{\chi} \) \(\text{\chi} has_security_awareness(A2,m) \)
- attack(incentive,r1,A2,a)~play(A2,r2)^play(attacker,r1)^scene(r2,l)^man datory_S_n(r1,S,a,Y)^mandatory_S_p(r2,S,a,Y)^has_security_awareness(A2,m)
- attack(incentive,r1,A2,a)—play(A2,r2) \(\text{play}(\text{attacker},r1) \(\text{Ascene}(r2,l) \(\text{nman} \)
 datory_disqualification_S_n(r1,S,a) \(\text{nmandatory_S_p(r2,S,a)} \(\text{has_security_awareness}(A2,m) \)
- attack(incentive,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)∧man datory_S_n(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧has_securit y awareness(A2,m)
- attack(incentive,r1,A2,a)—play(A2,r2) \(\text{play}(\text{attacker},r1) \(\text{Ascene}(r2,l) \(\text{man} \)
 datory_disqualification_S_n(r1,S,a) \(\text{mandatory_disqualification_S_p(r2,S,a) \(\text{has_security_awareness}(A2,m) \)
- attack(incentive,r1,A2,a)—play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,l) ν scene(r2,h)) Λ (mandatory_S_n(r1,S,a,Y) ν mandatory_disqualification_S_n(r1,S,a)) Λ (mandatory_S_p(r2,S,a,Y) ν mandatory_disqualification_S_n(r2,S,a)) Λ has security awareness(A2,l)
- attack(incentive,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)∧unc ertain_constraint(r1,a)∧mandatory_S_p(r2,S,a,Y)∧has_security_awarenes s(A2,h)
- attack(incentive,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)∧unc ertain_constraint(r1,a)∧mandatory_disqualification_S_p(r2,S,a)∧has_security awareness(A2,h)
- attack(incentive,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land unc ertain_constraint(r1,a) \land (mandatory_S_p(r2,S,a,Y) \lor mandatory_disqualific ation_S_p(r2,S,a)) \land has_security_awareness(A2,h)
- attack(incentive,r1,A2,a)—play(A2,r2) \(\text{play}(\text{attacker},r1) \(\text{Ascene}(r2,h) \(\text{Aunc} \)
 ertain_constraint(r1,a) \(\text{Amandatory} \) \(\text{Sp(r2,S,a,Y)} \(\text{Ahss_security} \) awarenes
 \(s(A2,m) \)
- attack(incentive,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)∧unc ertain_constraint(r1,a)∧mandatory_disqualification_S_p(r2,S,a)∧has_secu rity awareness(A2,m)
- attack(incentive,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,l) Λunc ertain_constraint(r1,a) Λ (mandatory_S_p(r2,S,a,Y) ν mandatory_disqualific ation S p(r2,S,a)) Λhas security awareness(A2,m)

attack(incentive,r1,A2,a)-play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,l) ν scene(r2,h)) Λ uncertain_constraint(r1,a) Λ (mandatory_S_p(r2,S,a,Y) ν mandatory_s disqualification S p(r2,S,a)) Λ has security awareness(A2,l)

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- attack(incentive,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h)vsc ene(r2,l))∧mandatory_S_n(r1,S,a,Y)∧mandatory_S_p(r2,S,a,Y)∧trust(A2,r 1)∧has security awareness(A2,h)
- attack(incentive,r1,A2,a)~play(A2,r2)^play(attacker,r1)^scene(r2,l)^man datory_disqualification_S_n(r1,S,a)^mandatory_S_p(r2,S,a,Y)^trust(A2,r1)^has security awareness(A2,h)
- attack(incentive,r1,A2,a)~play(A2,r2)^play(attacker,r1)^scene(r2,h)^ma ndatory_disqualification_S_n(r1,S,a)^mandatory_S_p(r2,S,a,Y)^trust(A2,r 1)^has_security_awareness(A2,h)
- attack(incentive,r1,A2,a)~play(A2,r2)^play(attacker,r1)^scene(r2,l)^man datory_S_n(r1,S,a,Y)^mandatory_disqualification_S_p(r2,S,a)^trust(A2,r1)^has_security_awareness(A2,h)
- attack(incentive,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)∧ma ndatory_S_n(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧trust(A2,r 1)∧has security awareness(A2,h)
- attack(incentive,r1,A2,a)←play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,h) ν sc ene(r2,l)) Λ mandatory_disqualification_S_n(r1,S,a) Λ mandatory_disqualific ation_S_p(r2,S,a) Λ trust(A2,r1) Λ has_security_awareness(A2,h)
- attack(incentive,r1,A2,a)~play(A2,r2)^play(attacker,r1)^(scene(r2,h)\vsc ene(r2,l))^mandatory_S_n(r1,S,a,Y)^mandatory_S_p(r2,S,a,Y)^trust(A2,r1)^has security awareness(A2,m)
- attack(incentive,r1,A2,a)—play(A2,r2) \(\text{play}(\text{attacker},r1) \(\text{\Lambda} \text{scene}(r2,l) \(\text{\Lambda} \text{man} \)
 datory_disqualification_S_n(r1,S,a) \(\text{\Lambda} \text{mandatory_S_p(r2,S,a,Y)} \(\text{\Lambda} \text{trust(A2,r1)} \)
 \(\text{\Lambda} \text{has security awareness(A2,m)} \)
- attack(incentive,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)∧ma ndatory_disqualification_S_n(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧trust(A2,r 1)∧has security awareness(A2,m)
- attack(incentive,r1,A2,a)—play(A2,r2) \(\text{play}(\text{attacker,r1} \) \(\text{scene}(r2,l) \(\text{man} \)
 datory_S_n(r1,S,a,Y) \(\text{mandatory_disqualification_S_p(r2,S,a)} \(\text{\text{trust}(A2,r1)} \)
 \(\text{has_security_awareness}(A2,m) \)
- attack(incentive,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)∧ma ndatory_S_n(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧trust(A2,r 1)∧has security awareness(A2,m)
- attack(incentive,r1,A2,a)←play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,h) vsc ene(r2,l)) Λ mandatory_disqualification_S_n(r1,S,a) Λ mandatory_disqualific ation S p(r2,S,a) Λ trust(A2,r1) Λ has security awareness(A2,m)
- attack(incentive,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) νsc ene(r2,l))Λ(mandatory_S_n(r1,S,a,Y)ν mandatory_disqualification_S_n(r1,S,a))Λ(mandatory_S_p(r2,S,a,Y)ν mandatory_disqualification_S_p(r2,S,a))Λtrust(A2,r1)Λhas_security_awareness(A2,l)

- attack(incentive,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λscene(r2,h)Λunc ertain_constraint(r1,a)Λmandatory_S_p(r2,S,a,Y)Λtrust(A2,r1)Λhas_secur ity awareness(A2,h)
- attack(incentive,r1,A2,a)←play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,h) ν scene(r2,l)) Λ uncertain_constraint(r1,a) Λ mandatory_disqualification_S_p(r2,S,a) Λ trust(A2,r1) Λ has_security_awareness(A2,h)
- attack(incentive,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)∧unc ertain_constraint(r1,a)∧mandatory_disqualification_S_p(r2,S,a)∧trust(A2, r1)∧has security awareness(A2,h)
- attack(incentive,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λscene(r2,h)Λunc ertain_constraint(r1,a)Λmandatory_S_p(r2,S,a,Y)Λtrust(A2,r1)Λhas_secur ity awareness(A2,m)
- attack(incentive,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) νsc ene(r2,l)) Λuncertain_constraint(r1,a) Λmandatory_disqualification_S_p(r2, S,a) Λtrust(A2,r1) Λhas security awareness(A2,m)
- attack(incentive,r1,A2,a)~play(A2,r2)^play(attacker,r1)^scene(r2,l)^uncertain_constraint(r1,a)^mandatory_disqualification_S_p(r2,S,a)^trust(A2,r1)^has_security_awareness(A2,m)
- attack(incentive,r1,A2,a)←play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,h) ν scene(r2,l)) Λ uncertain_constraint(r1,a) Λ (mandatory_S_p(r2,S,a,Y) ν mandatory_disqualification_S_p(r2,S,a)) Λ trust(A2,r1) Λ has_security_awareness(A2,l)
- attack(incentive,r1,A2,a)←play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,h) ν scene(r2,l)) Λ mandatory_S_n(r1,S,a,Y) Λ uncertain_constraint(r2,a) Λ generate (t,a) Λ Non_mandatory_C_p(r2,C,t) Λ has_security_awareness(A2,h)
- attack(incentive,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)∧ma ndatory_disqualification_S_n(r1,S,a)∧uncertain_constraint(r2,a)∧generat e(t,a)∧Non mandatory C p(r2,C,t)∧has security awareness(A2,h)
- attack(incentive,r1,A2,a)~play(A2,r2)^play(attacker,r1)^scene(r2,l)^man datory_disqualification_S_n(r1,S,a)^uncertain_constraint(r2,a)^generate(t,a)^Non_mandatory_C_p(r2,C,t)^has_security_awareness(A2,h)
- attack(incentive,r1,A2,a)←play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,h) ν scene(r2,l)) Λ mandatory_S_n(r1,S,a,Y) Λ uncertain_constraint(r2,a) Λ generate (t,a) Λ Non_mandatory_C_p(r2,C,t) Λ has_security_awareness(A2,m)
- attack(incentive,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,h) Λma ndatory_disqualification_S_n(r1,S,a) Λuncertain_constraint(r2,a) Λgenerat e(t,a) ΛNon_mandatory_C_p(r2,C,t) Λhas_security_awareness(A2,m)
- attack(incentive,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,l) Λman datory_disqualification_S_n(r1,S,a) Λuncertain_constraint(r2,a) Λgenerate(t,a) ΛNon mandatory C p(r2,C,t) Λhas security awareness(A2,m)
- attack(incentive,r1,A2,a)←play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,h) vsc ene(r2,l)) Λ (mandatory_S_n(r1,S,a,Y) ν mandatory_disqualification_S_n(r1,S,a)) Λ uncertain_constraint(r2,a) Λ generate(t,a) Λ Non_mandatory_C_p(r2,C,t) Λ has_security_awareness(A2,l)

- attack(incentive,r1,A2,a)←play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,h) ν scene(r2,l)) Λ uncertain_constraint(r1,a) Λ uncertain_constraint(r2,a) Λ generate(t,a) Λ Non_mandatory_C_p(r2,C,t) Λ has_security_awareness(A2,h)
- attack(incentive,r1,A2,a)←play(A2,r2) \(\text{play}(\) attacker,r1) \(\text{(scene}(r2,h) \) vsc ene(r2,l) \(\text{vuncertain_constraint}(r1,a) \(\text{vuncertain_constraint}(r2,a) \) \(\text{genera} \) te(t,a) \(\text{Non_mandatory_C_p(r2,C,t)} \(\text{h(has_security_awareness(A2,m)} \) vhas _security_awareness(A2,l))
- attack(incentive,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) vsc ene(r2,l))Λmandatory_S_n(r1,S,a,Y)Λuncertain_constraint(r2,a)Λgenerate (t,a)ΛNon_mandatory_C_p(r2,C,t)Λtrust(A2,r1)Λhas_security_awareness(A2,h)
- attack(incentive,r1,A2,a)←play(A2,r2) \(\text{play}(\text{attacker,r1} \) \(\text{scene}(r2,h) \(\text{nma} \)
 ndatory_disqualification_S_n(r1,S,a) \(\text{nuncertain_constraint}(r2,a) \(\text{ngenerat} \)
 e(t,a) \(\text{Non_mandatory_C_p(r2,C,t)} \(\text{ntrust}(A2,r1) \(\text{nhas_security_awareness} \)
 (A2,h)
- attack(incentive,r1,A2,a)—play(A2,r2) \(\text{play}(\text{attacker,r1} \) \(\text{scene}(r2,l) \(\text{man} \)
 datory_disqualification_S_n(r1,S,a) \(\text{nuncertain_constraint}(r2,a) \(\text{ngenerate}(r2,a) \(\text{ngenerate}(r2,c) \)
 trust(A2,r1) \(\text{nhas_security_awareness}(A2,b) \)
 2,h)
- attack(incentive,r1,A2,a)←play(A2,r2) \(\text{play}(\text{attacker},r1) \(\text{(scene}(r2,h) \(\text{vscene}(r2,h) \(\text{vscene}(r2,l) \) \(\text{mandatory}_S_n(r1,S,a,Y) \(\text{nuncertain}_constraint(r2,a) \(\text{generate}(r2,a) \(\text{Non}_mandatory_C_p(r2,C,t) \(\text{ntrust}(A2,r1) \(\text{has}_security_awareness(A2,m) \)
- attack(incentive,r1,A2,a)←play(A2,r2) \(\n \) play(attacker,r1) \(\n \) scene(r2,h) \(\n \) ma ndatory_disqualification_S_n(r1,S,a) \(\n \) uncertain_constraint(r2,a) \(\n \) generat e(t,a) \(\n \) Non_mandatory_C_p(r2,C,t) \(\n \) trust(A2,r1) \(\n \) has_security_awareness (A2,m)
- attack(incentive,r1,A2,a)—play(A2,r2) \(\text{play}(\text{attacker,r1}) \(\text{\Lambda} \text{scene}(r2,l) \(\text{\Lambda} \text{man} \) datory_disqualification_S_n(r1,S,a) \(\text{\Lambda} \text{uncertain_constraint}(r2,a) \(\text{\Lambda} \text{generate}(t,a) \(\text{\Lambda} \text{Non_mandatory_C_p(r2,C,t) \(\text{\Lambda} \text{trust}(A2,r1) \(\text{\Lambda} \text{has_security_awareness}(A2,m) \)
- attack(incentive,r1,A2,a)—play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,h) vsc ene(r2,l)) Λ ν (mandatory_S_n(r1,S,a,Y) ν mandatory_disqualification_S_n(r1,S,a)) Λ uncertain_constraint(r2,a) Λ generate(t,a) Λ Non_mandatory_C_p(r2,C,t) Λ trust(A2,r1) Λ has security awareness(A2,l)
- attack(incentive,r1,A2,a)←play(A2,r2) \(\text{play}(\) attacker,r1) \(\text{(scene}(r2,h) \) vsc ene(r2,l) \(\text{vuncertain_constraint}(r1,a) \(\text{vuncertain_constraint}(r2,a) \) \(\text{genera} \) te(t,a) \(\text{Non_mandatory_C_p(r2,C,t)} \) \(\text{vtrust}(A2,r1) \(\text{has_security_awarenes} \) s(A2,h)
- attack(incentive,r1,A2,a)←play(A2,r2) \(\text{play}(\) attacker,r1) \(\text{(scene(r2,h) vsc ene(r2,l)} \) \(\text{nucertain_constraint(r1,a)} \(\text{nuncertain_constraint(r2,a)} \) \(\text{genera te(t,a)} \(\text{Non_mandatory_C_p(r2,C,t)} \) \(\text{ntrust(A2,r1)} \(\text{has_security_awarene ss(A2,m)} \) \(\text{vhas_security_awareness(A2,l)} \)

Impersonation

- attack(impersonation,r1,A2,a)—play(A2,r2) Λ play(attacker,r1) Λ(scene(r2,h) ν scene(r2,l)) Λ mandatory_S_p(r1,S,a,Y) Λ mandatory_S_p(r2,S,a,Y) Λ mandatory_M p(r1,M,t,Y) Λ need(t,a) Λ has security awareness(A2,h)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h)vscene(r2,l))∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r1,M,t,Y)∧need(t,a)∧has_security_awareness(A2,h)
- attack(impersonation,r1,A2,a)←play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,h) ν scene(r2,l)) Λ mandatory_S_p(r1,S,a,Y) Λ mandatory_disqualification_S_p(r2,S,a) Λ mandatory_M_p(r1,M,t,Y) Λ need(t,a) Λ has_security_awareness(A2,h)
- attack(impersonation,r1,A2,a)←play(A2,r2) Λ play(attacker,r1) Λ (scene(r2, h) ν scene(r2,l)) Λ mandatory_S_p(r1,S,a,Y) Λ mandatory_S_p(r2,S,a,Y) Λ mandatory_disqualification_M_p(r1,M,t) Λ need(t,a) Λ has_security_awareness(A2,h)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h))∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_disqualification_S_p(r2,S,a)∧mandatory_M_p(r1,M,t,Y)∧need(t,a)∧has_security_awareness(A2,h)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l) ∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_disqualification_S_p (r2,S,a)∧mandatory_M_p(r1,M,t,Y)∧need(t,a)∧has_security_awareness(A 2,h)
- attack(impersonation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^scene(r2,h) mandatory_disqualification_S_p(r1,S,a)^mandatory_S_p(r2,S,a,Y)^mandatory_disqualification_M_p(r1,M,t)^need(t,a)^has_security_awareness(A2,h)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land mandatory_disqualification_S_p(r1,S,a) \land mandatory_S_p(r2,S,a,Y) \land mandatory_disqualification_M_p(r1,M,t) \land need(t,a) \land has_security_awareness(A2,h)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,h) \land mandatory_S_p(r1,S,a,Y) \land mandatory_disqualification_S_p(r2,S,a) \land mandatory_disqualification_M_p(r1,M,t) \land need(t,a) \land has_security_awareness(A2,h)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land mandatory_S_p(r1,S,a,Y) \land mandatory_disqualification_S_p(r2,S,a) \land mandatory_disqualification_M_p(r1,M,t) \land need(t,a) \land has_security_awareness(A2,h)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h
)∧mandatory disqualification S p(r1,S,a)∧mandatory disqualification S

- $p(r2,S,a) \land mandatory_disqualification_M_p(r1,M,t) \land need(t,a) \land has_securit$ y awareness(A2,h)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l) ∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_disqualification_S_p (r2,S,a)∧mandatory_disqualification_M_p(r1,M,t)∧need(t,a)∧has_security awareness(A2,h)
- attack(impersonation,r1,A2,a)—play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,h) ν scene(r2,l)) Λ mandatory_S_p(r1,S,a,Y) Λ mandatory_S_p(r2,S,a,Y) Λ mandatory_M p(r1,M,t,Y) Λ need(t,a) Λ has security awareness(A2,m)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h)vscene(r2,l))∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r1,M,t,Y)∧need(t,a)∧has_security_awareness(A2,m)
- attack(impersonation,r1,A2,a)—play(A2,r2) λ play(attacker,r1) λ (scene(r2, h) ν scene(r2,l)) λ mandatory_S_p(r1,S,a,Y) λ mandatory_disqualification_S_p(r2,S,a) λ mandatory_M_p(r1,M,t,Y) λ need(t,a) λ has_security_awareness(A2,m)
- attack(impersonation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^(scene(r2,h)vscene(r2,l))^mandatory_S_p(r1,S,a,Y)^mandatory_S_p(r2,S,a,Y)^mandatory_disqualification_M_p(r1,M,t)^need(t,a)^has_security_awareness(A2,m)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h))∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_disqualification_S_p(r2,S,a)∧mandatory_M_p(r1,M,t,Y)∧need(t,a)∧has_security_awareness(A2,m)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l) ∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_disqualification_S_p (r2,S,a)∧mandatory_M_p(r1,M,t,Y)∧need(t,a)∧has_security_awareness(A 2,m)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_disqualification_M_p(r1,M,t)∧need(t,a)∧has_security_awareness(A2,m)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land mandatory_disqualification_S_p(r1,S,a) \land mandatory_S_p(r2,S,a,Y) \land mandatory_disqualification_M_p(r1,M,t) \land need(t,a) \land has_security_awareness(A2,m)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)∧mandatory_S_p(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧mandatory_disqualification_M_p(r1,M,t)∧need(t,a)∧has_security_awareness(A2,m)
- attack(impersonation,r1,A2,a) ~ play(A2,r2) \(\text{play}(\text{attacker,r1} \) \(\text{scene}(r2,l) \)
 \(\text{mandatory} \) S_p(r1,S,a,Y) \(\text{mandatory} \) disqualification_S_p(r2,S,a) \(\text{mandatory} \)

- atory_disqualification_M_p(r1,M,t) \land need(t,a) \land has_security_awareness(A2,m)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h) ∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_disqualification_S_p(r2,S,a)∧mandatory_disqualification_M_p(r1,M,t)∧need(t,a)∧has_securit y awareness(A2,m)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l) ∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_disqualification_S_p (r2,S,a)∧mandatory_disqualification_M_p(r1,M,t)∧need(t,a)∧has_security awareness(A2,m)
- attack(impersonation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,l) Vscene(r2,h))Λ(mandatory_S_p(r1,S,a,Y) Vmandatory_disqualification_S_p(r1,S,a))Λ(mandatory_S_p(r2,S,a,Y) Vmandatory_disqualification_S_p(r2,S,a))Λ(mandatory_M_p(r1,M,t,Y) Vmandatory_disqualification_M_p(r1,M,t))Λneed(t,a)Λhas_security_awareness(A2,l)
- attack(impersonation,r1,A2,a)←play(A2,r2)Λplay(attacker,r1)Λ(scene(r2,h)νscene(r2,l))Λmandatory_S_p(r1,S,a,Y)Λmandatory_S_p(r2,S,a,Y)Λmandatory_M_p(r1,M,t,Y)Λneed(t,a)Λhas_security_awareness(A2,h)Λtrust(A2,r1)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h)vscene(r2,l))∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r1,M,t,Y)∧need(t,a)∧has_security_awareness(A2,h)∧trust(A2,r1)
- attack(impersonation,r1,A2,a)—play(A2,r2) λ play(attacker,r1) λ (scene(r2, h) ν scene(r2,l)) λ mandatory_S_p(r1,S,a,Y) λ mandatory_disqualification_S_p(r2,S,a) λ mandatory_M_p(r1,M,t,Y) λ need(t,a) λ has_security_awareness(A2,h) λ trust(A2,r1)
- attack(impersonation,r1,A2,a)←play(A2,r2) Λ play(attacker,r1) Λ (scene(r2, h) ν scene(r2,l)) Λ mandatory_S_p(r1,S,a,Y) Λ mandatory_S_p(r2,S,a,Y) Λ mandatory_disqualification_M_p(r1,M,t) Λ need(t,a) Λ has_security_awareness(A2,h) Λ trust(A2,r1)
- attack(impersonation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) ν scene(r2,l)) Λ mandatory_disqualification_S_p(r1,S,a) Λ mandatory_disqualification_S_p(r2,S,a,Y) Λ mandatory_M_p(r1,M,t) Λ need(t,a) Λ has_securit y awareness(A2,h) Λ trust(A2,r1)
- attack(impersonation,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h)νscene(r2,l))Λmandatory_disqualification_S_p(r1,S,a)Λmandatory_S_p(r2,S,a,Y)Λmandatory_disqualification_M_p(r1,M,t)Λneed(t,a)Λhas_security awareness(A2,h)Λtrust(A2,r1)
- attack(impersonation,r1,A2,a)←play(A2,r2) \(\triangle \) play(attacker,r1) \(\triangle \) (scene(r2, h) \(\triangle \) scene(r2,l) \(\triangle \) mandatory_S_p(r1,S,a,Y) \(\triangle \) mandatory_disqualification_S_p(r2,S,a) \(\triangle \) mandatory_disqualification_M_p(r1,M,t) \(\triangle \) need(t,a) \(\triangle \) has_securit y awareness(A2,h) \(\triangle \) trust(A2,r1)

- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h)vscene(r2,l))∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_disqualification_M_p(r1,M,t)∧need(t,a)∧has_security_awareness(A2,h)∧trust(A2,r1)
- attack(impersonation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^(scene(r2,h)vscene(r2,l))^mandatory_S_p(r1,S,a,Y)^mandatory_S_p(r2,S,a,Y)^mandatory_M_p(r1,M,t,Y)^need(t,a)^has_security_awareness(A2,m)^trust(A2,r1)
- attack(impersonation,r1,A2,a)←play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,h) ν scene(r2,l)) Λ mandatory_disqualification_S_p(r1,S,a) Λ mandatory_S_p(r2,S,a,Y) Λ mandatory_M_p(r1,M,t,Y) Λ need(t,a) Λ has_security_awareness(A2,m) Λ trust(A2,r1)
- attack(impersonation,r1,A2,a)—play(A2,r2) \(\triangle \) play(attacker,r1) \(\triangle \) (scene(r2,h) \(\triangle \) scene(r2,l) \(\triangle \) mandatory_S_p(r1,S,a,Y) \(\triangle \) mandatory_disqualification_S_p(r2,S,a) \(\triangle \) mandatory_M_p(r1,M,t,Y) \(\triangle \) need(t,a) \(\triangle \) has_security_awareness(A2,m) \(\triangle \) trust(A2,r1)
- attack(impersonation,r1,A2,a)←play(A2,r2) \(\n \) play(attacker,r1) \(\n \) (scene(r2, h) \(\n \) scene(r2,l) \(\n \) mandatory_S_p(r1,S,a,Y) \(\n \) mandatory_S_p(r2,S,a,Y) \(\n \) mandatory_disqualification_M_p(r1,M,t) \(\n \) need(t,a) \(\n \) has_security_awareness(A 2,m) \(\n \) trust(A2,r1)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h)vscene(r2,l))∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_disqualification_S_p(r2,S,a,Y)∧mandatory_M_p(r1,M,t)∧need(t,a)∧has_securit y_awareness(A2,m)∧trust(A2,r1)
- attack(impersonation,r1,A2,a)←play(A2,r2) Λ play(attacker,r1)Λ(scene(r2,h) ν scene(r2,l)) Λ mandatory_disqualification_S_p(r1,S,a) Λ mandatory_S_p(r2,S,a,Y) Λ mandatory_disqualification_M_p(r1,M,t) Λ need(t,a) Λ has_securit y awareness(A2,m) Λ trust(A2,r1)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land (scene(r2, h) \lor scene(r2,l)) \land mandatory_S_p(r1,S,a,Y) \land mandatory_disqualification_S_p(r2,S,a) \land mandatory_disqualification_M_p(r1,M,t) \land need(t,a) \land has_securit y_awareness(A2,m) \land trust(A2,r1)
- attack(impersonation,r1,A2,a)—play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,h) ν scene(r2,l)) Λ mandatory_disqualification_S_p(r1,S,a) Λ mandatory_disqualification_M_p(r1,M,t) Λ need(t,a) Λ has security awareness(A2,m) Λ trust(A2,r1)
- attack(impersonation,r1,A2,a)←play(A2,r2) ∧ play(attacker,r1) ∧ (scene(r2,l)) ∨ scene(r2,h)) ∧ (mandatory_S_p(r1,S,a,Y) ∨ mandatory_disqualification_S_p(r1,S,a)) ∧ (mandatory_S_p(r2,S,a,Y) ∨ mandatory_disqualification_S_p(r2,S,a)) ∧ (mandatory_M_p(r1,M,t,Y) ∨ mandatory_disqualification_M_p(r1,M,t)) ∧ need(t,a) ∧ has_security_awareness(A2,l) ∧ trust(A2,r1)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,h) \land (mandatory_S_p(r1,S,a,Y) \lor mandatory_disqualification_S_p(r1,S,a)) \land (m

- and atory_ $S_p(r_2,S,a,Y)v$ mand atory_disqualification_ $S_p(r_2,S,a))$ \land has_sec urity awareness(A2,h)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)
 ∧mandatory_S_p(r1,S,a,Y)∧mandatory_S_p(r2,S,a,Y)∧has_security_aware ness(A2,h)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)
 ∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧has_s
 ecurity awareness(A2,h)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)
 ∧mandatory_S_p(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧has_s
 ecurity awareness(A2,h)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)
 ∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_disqualification_S_p
 (r2,S,a)∧has_security_awareness(A2,h)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)∧(mandatory_S_p(r1,S,a,Y)νmandatory_disqualification_S_p(r1,S,a))∧(mandatory_S_p(r2,S,a,Y)νmandatory_disqualification_S_p(r2,S,a))∧has_security awareness(A2,m)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)
 ∧mandatory_S_p(r1,S,a,Y)∧mandatory_S_p(r2,S,a,Y)∧has_security_aware ness(A2,m)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)
 ∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧has_s
 ecurity_awareness(A2,m)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)
 ∧mandatory_S_p(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧has_s
 ecurity awareness(A2,m)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)
 ∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_disqualification_S_p
 (r2,S,a)∧has_security_awareness(A2,m)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,l))vscene(r2,h))∧(mandatory_S_p(r1,S,a,Y)vmandatory_disqualification_S_p(r1,S,a))∧(mandatory_S_p(r2,S,a,Y)vmandatory_disqualification_S_p(r2,S,a))∧has security awareness(A2,l)
- attack(impersonation,r1,A2,a)←play(A2,r2) Λ play(attacker,r1) Λ (scene(r2,l) ν scene(r2,h)) Λ mandatory_S_p(r1,S,a,Y) Λ mandatory_S_p(r2,S,a,Y) Λ has_s ecurity awareness(A2,h) Λ trust(A2,r1)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,h) \land mandatory_disqualification_S_p(r1,S,a) \land mandatory_S_p(r2,S,a,Y) \land has_security_awareness(A2,h) \land trust(A2,r1)
- attack(impersonation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^scene(r2,l) ^nandatory_disqualification_S_p(r1,S,a)^mandatory_S_p(r2,S,a,Y)^has_s ecurity_awareness(A2,h)^trust(A2,r1)

- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)∧mandatory_S_p(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧has_security_awareness(A2,h)∧trust(A2,r1)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land mandatory_S_p(r1,S,a,Y) \land mandatory_disqualification_S_p(r2,S,a) \land has_s ecurity awareness(A2,h) \land trust(A2,r1)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)
 ∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_disqualification_S_p
 (r2,S,a)∧has security awareness(A2,h)∧trust(A2,r1)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,l))∨scene(r2,h))∧mandatory_S_p(r1,S,a,Y)∧mandatory_S_p(r2,S,a,Y)∧has_s ecurity awareness(A2,m)∧trust(A2,r1)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧has_security_awareness(A2,m)∧trust(A2,r1)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land mandatory_disqualification_S_p(r1,S,a) \land mandatory_S_p(r2,S,a,Y) \land has_s ecurity_awareness(A2,m) \land trust(A2,r1)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)∧mandatory_S_p(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧has_security_awareness(A2,m)∧trust(A2,r1)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)
 ∧mandatory_S_p(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧has_s
 ecurity awareness(A2,m)∧trust(A2,r1)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land mandatory_disqualification_S_p(r1,S,a) \land mandatory_disqualification_S_p (r2,S,a) \land has_security_awareness(A2,m) \land trust(A2,r1)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,l))vscene(r2,h))∧(mandatory_S_p(r1,S,a,Y)vmandatory_disqualification_S_p(r1,S,a))∧(mandatory_S_p(r2,S,a,Y)vmandatory_disqualification_S_p(r2,S,a))∧has security awareness(A2,l)∧trust(A2,r1)
- attack(impersonation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^(scene(r2,h)vscene(r2,l))^depend(r1,a,r2)^mandatory_S_p(r1,S,a,Y)^mandatory_S_p(r2,S,a,Y)^has_security_awareness(A2,h)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h))∧depend(r1,a,r2)∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_S _p(r2,S,a,Y)∧has_security_awareness(A2,h)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land depend(r1,a,r2) \land mandatory_disqualification_S_p(r1,S,a) \land mandatory_S_p(r2,S,a,Y) \land has_security_awareness(A2,h)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,h) \land depend(r1,a,r2) \land mandatory_S_p(r1,S,a,Y) \land mandatory_disqualification_S_p(r2,S,a) \land has_security_awareness(A2,h)

- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land depend(r1,a,r2) \land mandatory_S_p(r1,S,a,Y) \land mandatory_disqualification_S_p(r2,S,a) \land has_security_awareness(A2,h)
- attack(impersonation,r1,A2,a)—play(A2,r2) \(\triangle play(attacker,r1) \(\triangle (scene(r2,h) \triangle scene(r2,l)) \(\triangle depend(r1,a,r2) \(\triangle mandatory_disqualification_S_p(r1,S,a) \) \(\triangle mandatory_disqualification_S_p(r2,S,a) \(\triangle has_security_awareness(A2,h) \)
- attack(impersonation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^(scene(r2,h)vscene(r2,l))^depend(r1,a,r2)^mandatory_S_p(r1,S,a,Y)^mandatory_S_p(r2,S,a,Y)^has_security_awareness(A2,m)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)∧depend(r1,a,r2)∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_S p(r2,S,a,Y)∧has security awareness(A2,m)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)
 ∧depend(r1,a,r2)∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧has security awareness(A2,m)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,h) \land depend(r1,a,r2) \land mandatory_S_p(r1,S,a,Y) \land mandatory_disqualification_S_p(r2,S,a) \land has_security_awareness(A2,m)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land depend(r1,a,r2) \land mandatory_S_p(r1,S,a,Y) \land mandatory_disqualification_S_p(r2,S,a) \land has_security_awareness(A2,m)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)∧depend(r1,a,r2)∧mandatory_disqualification_S_p(r1,S,a)∧mandatory_disqualification_S p(r2,S,a)∧has security awareness(A2,m)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land depend(r1,a,r2) \land mandatory_disqualification_S_p(r1,S,a) \land mandatory_disqualification_S_p(r2,S,a) \land has_security_awareness(A2,m)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land (scene(r2, h) \lor scene(r2,l)) \land depend(r1,a,r2) \land (mandatory_S_p(r1,S,a,Y) \lor mandatory_d isqualification_S_p(r1,S,a)) \land (mandatory_S_p(r2,S,a,Y) \lor mandatory_disqua lification_S_p(r2,S,a)) \land has_security_awareness(A2,l)
- attack(impersonation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^(scene(r2,h)vscene(r2,l))^depend(r1,a,r2)^mandatory_S_p(r1,S,a,Y)^mandatory_S_p(r2,S,a,Y)^has security awareness(A2,h)^trust(A2,r1)
- attack(impersonation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^(scene(r2,h)vscene(r2,l))^depend(r1,a,r2)^mandatory_disqualification_S_p(r1,S,a)^mandatory_S_p(r2,S,a,Y)^has_security_awareness(A2,h)^trust(A2,r1)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land (scene(r2,h) \lor scene(r2,l)) \land depend(r1,a,r2) \land mandatory_S_p(r1,S,a,Y) \land mandatory_disqualification_S_p(r2,S,a) \land has_security_awareness(A2,h) \land trust(A2,r1)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land (scene(r2,h) \lor scene(r2,l)) \land depend(r1,a,r2) \land mandatory_disqualification

- $_S_p(r1,S,a) \land mandatory_disqualification_S_p(r2,S,a) \land has_security_aware ness(A2,h)) \land trust(A2,r1)$
- attack(impersonation,r1,A2,a)~play(A2,r2)^play(attacker,r1)^(scene(r2,h)vscene(r2,l))^depend(r1,a,r2)^mandatory_S_p(r1,S,a,Y)^mandatory_S_p(r2,S,a,Y)^has_security_awareness(A2,h)^trust(A2,r1)
- attack(impersonation,r1,A2,a)—play(A2,r2) Λ play(attacker,r1) Λ(scene(r2,h) ν scene(r2,l)) Λ depend(r1,a,r2) Λ mandatory_disqualification_S_p(r1,S,a)
 Λ mandatory_S_p(r2,S,a,Y) Λ has_security_awareness(A2,h) Λ trust(A2,r1)
- attack(impersonation,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h)vscene(r2,l))∧depend(r1,a,r2)∧mandatory_S_p(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧has_security_awareness(A2,h)∧trust(A2,r1)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land (scene(r2,h) \lor scene(r2,l)) \lor scene(r2,l)) \land depend(r1,a,r2) \land mandatory_disqualification_S_p(r1,S,a) \land mandatory_disqualification_S_p(r2,S,a) \land has_security_aware ness(A2,h)) \land trust(A2,r1)
- attack(impersonation,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land (scene(r2,h) \lor scene(r2,l)) \land depend(r1,a,r2) \land (mandatory_S_p(r1,S,a,Y) \lor mandatory_d is qualification_S_p(r1,S,a)) \land (mandatory_S_p(r2,S,a,Y) \lor mandatory_disqua lification_S_p(r2,S,a)) \land has_security_awareness(A2,l)) \land trust(A2,r1)

Responsibility

- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_S_n(r1,S,a,Y)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧subordinate(r1,r2)∧generate(t,a)∧has_security_awar eness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧subordinate(r1,r2)∧generate(t,a)∧has_security_awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_S_n(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧mandatory_M_p(r2,M,t,Y)∧subordinate(r1,r2)∧generate(t,a)∧has security awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_S_n(r1,S,a,Y)∧mandatory_S_p(r2,S,a,Y)∧mandatory_disqualification_M_p(r2,M,t)∧subordinate(r1,r2)∧generate(t,a)∧has_security_awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)
 ∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_disqualification_S_p
 (r2,S,a)∧mandatory_M_p(r2,M,t,Y)∧subordinate(r1,r2)∧generate(t,a)∧ha
 s security awareness(A2,h)

- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)
 ∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_disqualification_S_p
 (r2,S,a)∧mandatory_M_p(r2,M,t,Y)∧subordinate(r1,r2)∧generate(t,a)∧ha
 s security awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)
 ∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_disqualification_M_p(r2,M,t)∧subordinate(r1,r2)∧generate(t,a)∧has security awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l) ∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧mand atory_disqualification_M_p(r2,M,t)∧subordinate(r1,r2)∧generate(t,a)∧has security awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h) ∧mandatory_S_n(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧mand atory_disqualification_M_p(r2,M,t)∧subordinate(r1,r2)∧generate(t,a)∧has _security_awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2) \(\text{play}(\text{attacker,r1} \) \(\text{scene}(r2,l) \)
 \(\text{Amandatory_S_n(r1,S,a,Y} \) \(\text{Amandatory_disqualification_S_p(r2,S,a)} \) \(\text{Amandatory_disqualification_M_p(r2,M,t)} \) \(\text{subordinate}(r1,r2) \(\text{Agenerate}(t,a) \) \(\text{Ahas_security_awareness}(A2,h) \)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_disqualification_M_p(r2,M,t)∧subordinate(r1,r2)∧generate(t,a)∧has security awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_S_n(r1,S,a,Y)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧subordinate(r1,r2)∧generate(t,a)∧has_security_awar eness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h))
 vscene(r2,l))∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧subordinate(r1,r2)∧generate(t,a)∧has_security_awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_S_n(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧mandatory_M_p(r2,M,t,Y)∧subordinate(r1,r2)∧generate(t,a)∧has security awareness(A2,m)
- attack(responsibility,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land (scene(r2,h) \lor scene(r2,l)) \land mandatory_S_n(r1,S,a,Y) \land mandatory_S_p(r2,S,a,Y) \land mandatory_disqualification_M_p(r2,M,t) \land subordinate(r1,r2) \land generate(t,a) \land has_security_awareness(A2,m)
- attack(responsibility,r1,A2,a)~play(A2,r2)^play(attacker,r1)^scene(r2,h) ^nandatory_disqualification_S_n(r1,S,a)^mandatory_disqualification_S_p (r2,S,a)^mandatory_M_p(r2,M,t,Y)^subordinate(r1,r2)^generate(t,a)^ha s_security_awareness(A2,m)

- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)
 ∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_disqualification_S_p
 (r2,S,a)∧mandatory_M_p(r2,M,t,Y)∧subordinate(r1,r2)∧generate(t,a)∧ha
 s security awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)
 ∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_disqualification_M_p(r2,M,t)∧subordinate(r1,r2)∧generate(t,a)∧has security awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)
 ∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_disqualification_M_p(r2,M,t)∧subordinate(r1,r2)∧generate(t,a)∧has security awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)
 ∧mandatory_S_n(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧mandatory_disqualification_M_p(r2,M,t)∧subordinate(r1,r2)∧generate(t,a)∧has_security_awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l) ∧mandatory_S_n(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧mand atory_disqualification_M_p(r2,M,t)∧subordinate(r1,r2)∧generate(t,a)∧has security awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h) ∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_disqualification_S_p (r2,S,a)∧mandatory_disqualification_M_p(r2,M,t)∧subordinate(r1,r2)∧ge nerate(t,a)∧has_security_awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)
 ∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_disqualification_S_p
 (r2,S,a)∧mandatory_disqualification_M_p(r2,M,t)∧subordinate(r1,r2)∧ge
 nerate(t,a)∧has security awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) Vscene(r2,l))Λ(mandatory_S_n(r1,S,a,Y)νmandatory_disqualification_S_n(r1,S,a))Λ(mandatory_S_p(r2,S,a,Y)νmandatory_disqualification_S_p(r2,S,a))Λ(mandatory_M_p(r2,M,t,Y)νmandatory_disqualification_M_p(r2,M,t)) Λsubordinate(r1,r2)Λgenerate(t,a)Λhas security awareness(A2,l)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_S_n(r1,S,a,Y)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧generate(t,a)∧authority(r1,r2)∧has_security_awaren ess(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧generate(t,a)∧authority(r1,r2)∧has_sec urity awareness(A2,h)
- attack(responsibility,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land (scene(r2,h) \lor scene(r2,l)) \land mandatory_S_n(r1,S,a,Y) \land mandatory_disqualification_S_p(

- r2,S,a) \land mandatory_M_p(r2,M,t,Y) \land generate(t,a) \land authority(r1,r2) \land has_se curity awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_S_n(r1,S,a,Y)∧mandatory_S_p(r2,S,a,Y)∧mandatory_disqualification_M_p(r2,M,t)∧generate(t,a)∧authority(r1,r2)∧has_se curity awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_disqualification_S_p(r2,S,a)∧mandatory_M_p(r2,M,t,Y)∧generate(t,a)∧authority(r1,r2)∧has security awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h))
 vscene(r2,l))∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_disqualification_M_p(r2,M,t)∧generate(t,a)∧authority(r1,r2)∧has security awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_S_n(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧mandatory_disqualification_M_p(r2,M,t)∧generate(t,a)∧authority (r1,r2)∧has security awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_disqualification_M_p(r2,M,t)∧generate(t,a)∧authority(r1,r2)∧has_security_awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_S_n(r1,S,a,Y)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧generate(t,a)∧authority(r1,r2)∧has_security_awaren ess(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧generate(t,a)∧authority(r1,r2)∧has_sec urity awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_S_n(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧mandatory_M_p(r2,M,t,Y)∧generate(t,a)∧authority(r1,r2)∧has_se curity awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_S_n(r1,S,a,Y)∧mandatory_S_p(r2,S,a,Y)∧mandatory_disqualification_M_p(r2,M,t)∧generate(t,a)∧authority(r1,r2)∧has_se curity awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_disqualification_S_p(r2,S,a)∧mandatory_M_p(r2,M,t,Y)∧generate(t,a)∧authority(r1,r2)∧has_security_awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h)
 vscene(r2,l))∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_S_p(r2,

- S,a,Y) Λ mandatory_disqualification_ $M_p(r2,M,t)$ Λ generate(t,a) Λ authority(r1,r2) Λ has security awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_S_n(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧mandatory_disqualification_M_p(r2,M,t)∧generate(t,a)∧authority (r1,r2)∧has security awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_disqualification_S_p(r2,S,a)∧mandatory_disqualification_M_p(r2,M,t)∧generate(t,a)∧authority(r1,r2)∧has security awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) Vscene(r2,l))Λ(mandatory_S_n(r1,S,a,Y)νmandatory_disqualification_S_n(r1,S,a))Λ(mandatory_S_p(r2,S,a,Y)νmandatory_disqualification_S_p(r2,S,a))Λ(mandatory_M_p(r2,M,t,Y)νmandatory_disqualification_M_p(r2,M,t)) Λgenerate(t,a)Λauthority(r1,r2)Λhas_security_awareness(A2,l)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_S_n(r1,S,a,Y)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧generate(t,a)∧ex_cooperation(r1,r2)∧has_security_a wareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,h)
 Λmandatory_disqualification_S_n(r1,S,a) Λmandatory_S_p(r2,S,a,Y) Λmandatory_M_p(r2,M,t,Y) Λgenerate(t,a) Λex_cooperation(r1,r2) Λhas_security_a wareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,l)
 Λmandatory_disqualification_S_n(r1,S,a) Λmandatory_S_p(r2,S,a,Y) Λmandatory_M_p(r2,M,t,Y) Λgenerate(t,a) Λex_cooperation(r1,r2) Λhas_security_a wareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2) \(\text{play}(\) attacker,r1) \(\text{\chick} \) scene(r2,h)
 \(\text{\chick} \) mandatory_S_n(r1,S,a,Y) \(\text{\chick} \) mandatory_disqualification_S_p(r2,S,a) \(\text{\chick} \) mandatory_M_p(r2,M,t,Y) \(\text{\chick} \) generate(t,a) \(\text{\chick} \) ex_cooperation(r1,r2) \(\text{\chick} \) has_security_a wareness(A2,h)
- attack(responsibility,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land mandatory_S_n(r1,S,a,Y) \land mandatory_disqualification_S_p(r2,S,a) \land mandatory_M_p(r2,M,t,Y) \land generate(t,a) \land ex_cooperation(r1,r2) \land has_security_a wareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h) ∧mandatory_S_n(r1,S,a,Y)∧mandatory_S_p(r2,S,a,Y)∧mandatory_disquali fication_M_p(r2,M,t,Y)∧generate(t,a)∧ex_cooperation(r1,r2)∧has_securit y awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l) ∧mandatory_S_n(r1,S,a,Y)∧mandatory_S_p(r2,S,a,Y)∧mandatory_disquali fication_M_p(r2,M,t,Y)∧generate(t,a)∧ex_cooperation(r1,r2)∧has_securit y awareness(A2,h)

- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_disqualification_S_p(r2,S,a)∧mandatory_M_p(r2,M,t,Y)∧generate(t,a)∧ex_cooperation(r1,r2)∧has security awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_disqualification_M_p(r2,M,t)∧generate(t,a)∧ex_cooper ation(r1,r2)∧has security awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_S_n(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧mandatory_disqualification_M_p(r2,M,t)∧generate(t,a)∧ex_coope ration(r1,r2)∧has security awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_disqualification_M_p(r2,M,t)∧generate(t,a)∧ex cooperation(r1,r2)∧has security awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_S_n(r1,S,a,Y)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧generate(t,a)∧ex_cooperation(r1,r2)∧has_security_a wareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2) \(\rho \) play(attacker,r1) \(\rho \) scene(r2,h)
 \(\rho \) mandatory_disqualification_S_n(r1,S,a) \(\rho \) mandatory_S_p(r2,S,a,Y) \(\rho \) mandatory_M_p(r2,M,t,Y) \(\rho \) generate(t,a) \(\rho \) ex_cooperation(r1,r2) \(\rho \) has_security_a wareness(A2,h)
- attack(responsibility,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land mandatory_disqualification_S_n(r1,S,a) \land mandatory_S_p(r2,S,a,Y) \land mandatory_M_p(r2,M,t,Y) \land generate(t,a) \land ex_cooperation(r1,r2) \land has_security_a wareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2) Λplay(attacker,r1) Λscene(r2,h)
 Λmandatory_S_n(r1,S,a,Y) Λmandatory_disqualification_S_p(r2,S,a) Λmandatory_M_p(r2,M,t,Y) Λgenerate(t,a) Λex_cooperation(r1,r2) Λhas_security_a wareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l) ∧mandatory_S_n(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧mandatory_M_p(r2,M,t,Y)∧generate(t,a)∧ex_cooperation(r1,r2)∧has_security_a wareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h) ∧mandatory_S_n(r1,S,a,Y)∧mandatory_S_p(r2,S,a,Y)∧mandatory_disquali fication_M_p(r2,M,t,Y)∧generate(t,a)∧ex_cooperation(r1,r2)∧has_securit y_awareness(A2,m)
- attack(responsibility,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land scene(r2,l) \land mandatory_S_n(r1,S,a,Y) \land mandatory_S_p(r2,S,a,Y) \land mandatory_disquali fication_M_p(r2,M,t,Y) \land generate(t,a) \land ex_cooperation(r1,r2) \land has_securit y_awareness(A2,m)

- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h))
 vscene(r2,l))∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_disqualification_S_p(r2,S,a)∧mandatory_M_p(r2,M,t,Y)∧generate(t,a)∧ex_cooperation(r1,r2)∧has security awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h))
 vscene(r2,l))∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_disqualification_M_p(r2,M,t)∧generate(t,a)∧ex_cooper ation(r1,r2)∧has security awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_S_n(r1,S,a,Y)∧mandatory_disqualification_S_p(r2,S,a)∧mandatory_disqualification_M_p(r2,M,t)∧generate(t,a)∧ex_coope ration(r1,r2)∧has security awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧mandatory_disqualification_S_n(r1,S,a)∧mandatory_disqualification_M_p(r2,M,t)∧generate(t,a)∧ex cooperation(r1,r2)∧has security awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) Vscene(r2,l))Λ(mandatory_S_n(r1,S,a,Y)νmandatory_disqualification_S_n(r1,S,a))Λ(mandatory_S_p(r2,S,a,Y)νmandatory_disqualification_S_p(r2,S,a))Λ(mandatory_M_p(r2,M,t,Y)νmandatory_disqualification_M_p(r2,M,t)) Λgenerate(t,a)Λex_cooperation(r1,r2)Λhas_security_awareness(A2,l)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)
 ∧uncertain_constraint(r1,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧subordinate(r1,r2)∧has security awareness(A2,h)
- attack(responsibility,r1,A2,a)—play(A2,r2)^play(attacker,r1)^scene(r2,l) ^nuncertain_constraint(r1,a)^mandatory_S_p(r2,S,a,Y)^mandatory_M_p(r2,M,t,Y)^subordinate(r1,r2)^has_security_awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧subordinate(r1,r2)∧has_security_awar eness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧uncertain_constraint(r1,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_disqualification_M_p(r2,M,t)∧subordinate(r1,r2)∧has_security_awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h) ∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a)∧manda tory_qualification_M_p(r2,M,t)∧subordinate(r1,r2)∧has_security_awarene ss(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l) ∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a)∧manda tory_qualification_M_p(r2,M,t)∧subordinate(r1,r2)∧has_security_awarene ss(A2,h)

- attack(responsibility,r1,A2,a)~play(A2,r2)^play(attacker,r1)^(scene(r2,h))
 vscene(r2,l))^uncertain_constraint(r1,a)^mandatory_S_p(r2,S,a,Y)^mandatory_M_p(r2,M,t,Y)^subordinate(r1,r2)^has_security_awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧subordinate(r1,r2)∧has_security_awar eness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧uncertain_constraint(r1,a)∧mandatory_S_p(r2,S,a,Y)∧mand atory_disqualification_M_p(r2,M,t)∧subordinate(r1,r2)∧has_security_awa reness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)
 ∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a)∧mandatory_qualification_M_p(r2,M,t)∧subordinate(r1,r2)∧has_security_awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l) ∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a)∧manda tory_qualification_M_p(r2,M,t)∧subordinate(r1,r2)∧has_security_awarene ss(A2,m)
- attack(responsibility,r1,A2,a) ~ play(A2,r2) ~ play(attacker,r1) ~ (scene(r2,h) ~ vscene(r2,l)) ~ uncertain_constraint(r1,a) ~ (mandatory_S_p(r2,S,a,Y) ~ vman datory_qualification_S_p(r2,S,a)) ~ (mandatory_M_p(r2,M,t,Y) ~ vmandatory_qualification_M_p(r2,M,t)) ~ subordinate(r1,r2) ~ has_security_awareness(A2,l)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h) ∧uncertain_constraint(r1,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r 2,M,t,Y)∧authority(r1,r2)∧has_security_awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)
 ∧uncertain_constraint(r1,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧authority(r1,r2)∧has_security_awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧authority(r1,r2)∧has_security_awaren ess(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧uncertain_constraint(r1,a)∧mandatory_S_p(r2,S,a,Y)∧mand atory_disqualification_M_p(r2,M,t)∧authority(r1,r2)∧has_security_aware ness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) Vscene(r2,l))∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a)∧mandatory_qualification_M_p(r2,M,t)∧authority(r1,r2)∧has_securit y awareness(A2,h)

- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)
 ∧uncertain_constraint(r1,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧authority(r1,r2)∧has security awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)
 ∧uncertain_constraint(r1,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧authority(r1,r2)∧has_security_awareness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧authority(r1,r2)∧has_security_awaren ess(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧uncertain_constraint(r1,a)∧mandatory_S_p(r2,S,a,Y)∧mand atory_disqualification_M_p(r2,M,t)∧authority(r1,r2)∧has_security_aware ness(A2,m)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a)∧mandatory_qualification_M_p(r2,M,t)∧authority(r1,r2)∧has_securit y awareness(A2,m)
- attack(responsibility,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land (scene(r2,h) \lor scene(r2,l)) \land uncertain_constraint(r1,a) \land (mandatory_S_p(r2,S,a,Y) \lor mandatory_qualification_S_p(r2,S,a)) \land (mandatory_M_p(r2,M,t,Y) \lor mandatory_qualification_M_p(r2,M,t)) \land authority(r1,r2) \land has_security_awareness(A2,l)
- attack(responsibility,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) Vscene(r2,l))Λuncertain_constraint(r1,a)Λmandatory_S_p(r2,S,a,Y)Λmandatory_M_p(r2,M,t,Y)Λex_cooperation(r1,r2)Λhas_security_awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a)∧mandatory_M_p(r2,M,t,Y)∧ex_cooperation(r1,r2)∧has_security_awa reness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧uncertain_constraint(r1,a)∧mandatory_S_p(r2,S,a,Y)∧mand atory_qualification_M_p(r2,M,t)∧ex_cooperation(r1,r2)∧has_security_awa reness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h) ∧uncertain_constraint(r1,a)∧mandatory_disqualification_S_p(r2,S,a,Y)∧m andatory_disqualification_M_p(r2,M,t)∧ex_cooperation(r1,r2)∧has_securi ty awareness(A2,h)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l) ∧uncertain_constraint(r1,a)∧mandatory_disqualification_S_p(r2,S,a,Y)∧m andatory_disqualification_M_p(r2,M,t)∧ex_cooperation(r1,r2)∧has_securi ty awareness(A2,h)

- attack(responsibility,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) Vscene(r2,l))Λuncertain_constraint(r1,a)Λ(mandatory_S_p(r2,S,a,Y)νman datory_qualification_S_p(r2,S,a))Λ(mandatory_M_p(r2,M,t,Y)νmandatory_qualification_M_p(r2,M,t))Λex_cooperation(r1,r2)Λ(has_security_awarene ss(A2,l)νhas security awareness(A2,m))
- attack(responsibility,r1,A2,a)—play(A2,r2) Λplay(attacker,r1)Λscene(r2,h)
 Λuncertain_constraint(r1,a)Λmandatory_S_p(r2,S,a,Y)Λmandatory_M_p(r2,M,t,Y)Λsubordinate(r1,r2)Λhas security awareness(A2,h)Λtrust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l) ∧uncertain_constraint(r1,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r 2,M,t,Y)∧subordinate(r1,r2)∧has_security_awareness(A2,h)∧trust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧subordinate(r1,r2)∧has_security_awar eness(A2,h)∧trust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) Vscene(r2,l))Λuncertain_constraint(r1,a)Λmandatory_S_p(r2,S,a,Y)Λmandatory_disqualification_M_p(r2,M,t)Λsubordinate(r1,r2)Λhas_security_awareness(A2,h)Λtrust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h) ∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a)∧manda tory_qualification_M_p(r2,M,t)∧subordinate(r1,r2)∧has_security_awarene ss(A2,h)∧trust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l) ∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a)∧manda tory_qualification_M_p(r2,M,t)∧subordinate(r1,r2)∧has_security_awarene ss(A2,h)∧trust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) Vscene(r2,l)) Λuncertain_constraint(r1,a)Λmandatory_S_p(r2,S,a,Y)Λmandatory_M_p(r2,M,t,Y)Λsubordinate(r1,r2)Λhas_security_awareness(A2,m)Λ trust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧subordinate(r1,r2)∧has_security_awar eness(A2,m)∧trust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧uncertain_constraint(r1,a)∧mandatory_S_p(r2,S,a,Y)∧mand atory_disqualification_M_p(r2,M,t)∧subordinate(r1,r2)∧has_security_awa reness(A2,m)∧trust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a)∧mandatory_qualification_M_p(r2,M,t)∧subordinate(r1,r2)∧has_security awareness(A2,m)∧trust(A2,r1)

- attack(responsibility,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) Vscene(r2,l))Λuncertain_constraint(r1,a)Λ(mandatory_S_p(r2,S,a,Y)νman datory_qualification_S_p(r2,S,a))Λ(mandatory_M_p(r2,M,t,Y)νmandatory_qualification_M_p(r2,M,t))Λsubordinate(r1,r2)Λhas_security_awareness(A2,l)Λtrust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2) \(\nabla play(attacker,r1) \(\nabla (scene(r2,h) \) \(\nabla scene(r2,l) \) \(\nabla uncertain_constraint(r1,a) \) \(\nabla mandatory_S_p(r2,S,a,Y) \) \(\nabla mandatory_M_p(r2,M,t,Y) \) \(\nabla uthority(r1,r2) \) \(\nabla has_security_awareness(A2,h) \) \(\nabla trust(A2,r1) \)
- attack(responsibility,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) Vscene(r2,l)) Λuncertain_constraint(r1,a)Λmandatory_qualification_S_p(r2,S,a,Y)Λmandatory_M_p(r2,M,t,Y)Λauthority(r1,r2)Λhas_security_awaren ess(A2,h)Λtrust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) Vscene(r2,l))Λuncertain_constraint(r1,a)Λmandatory_S_p(r2,S,a,Y)Λmandatory_disqualification_M_p(r2,M,t)Λauthority(r1,r2)Λhas_security_aware ness(A2,h)Λtrust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)
 ∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a)∧mandatory_qualification_M_p(r2,M,t)∧authority(r1,r2)∧has_security_awareness(A2,h)∧trust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l) ∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a)∧manda tory_qualification_M_p(r2,M,t)∧authority(r1,r2)∧has_security_awareness(A2,h)∧trust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,h)
 ∧uncertain_constraint(r1,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧authority(r1,r2)∧has security awareness(A2,m)∧trust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)
 ∧uncertain_constraint(r1,a)∧mandatory_S_p(r2,S,a,Y)∧mandatory_M_p(r2,M,t,Y)∧authority(r1,r2)∧has security awareness(A2,m)∧trust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2) \(\nabla play(attacker,r1) \(\nabla (scene(r2,h) \) \(\nabla scene(r2,l) \) \(\nabla uncertain_constraint(r1,a) \) \(\nabla mandatory_qualification_S_p(r2,S,a,Y) \(\nabla mandatory_M_p(r2,M,t,Y) \) \(\nabla authority(r1,r2) \(\nabla has_security_awaren \) \(\ext{ess}(A2,m) \) \(\nabla trust(A2,r1) \)
- attack(responsibility,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) Vscene(r2,l))Λuncertain_constraint(r1,a)Λmandatory_S_p(r2,S,a,Y)Λmandatory_disqualification_M_p(r2,M,t)Λauthority(r1,r2)Λhas_security_aware ness(A2,m)Λtrust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h) vscene(r2,l))∧uncertain_constraint(r1,a)∧mandatory_qualification_S_p(r2,S,a)∧mandatory_qualification_M_p(r2,M,t)∧authority(r1,r2)∧has_securit y awareness(A2,m)∧trust(A2,r1)

- attack(responsibility,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) Vscene(r2,l))Λuncertain_constraint(r1,a)Λ(mandatory_S_p(r2,S,a,Y)νman datory_qualification_S_p(r2,S,a))Λ(mandatory_M_p(r2,M,t,Y)νmandatory_qualification_M_p(r2,M,t))Λauthority(r1,r2)Λhas_security_awareness(A2,l)Λtrust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) Vscene(r2,l)) Λuncertain_constraint(r1,a)Λmandatory_S_p(r2,S,a,Y)Λmandatory_M_p(r2,M,t,Y)Λex_cooperation(r1,r2)Λhas_security_awareness(A2,h)Λtrust(A2,r1)
- attack(responsibility,r1,A2,a)←play(A2,r2) \(\nabla play(attacker,r1) \(\nabla (scene(r2,h) \) \(\nabla scene(r2,l) \) \(\nabla uncertain_constraint(r1,a) \(\nabla mandatory_qualification_S_p(r2,S,a) \) \(\nabla mandatory_M_p(r2,M,t,Y) \(\nabla ex_cooperation(r1,r2) \) \(\nabla has_security_awa \) \(\nabla ex_s(A2,h) \(\nabla trust(A2,r1) \)
- attack(responsibility,r1,A2,a)←play(A2,r2) Λplay(attacker,r1)Λ(scene(r2,h) Vscene(r2,l))Λuncertain_constraint(r1,a)Λmandatory_S_p(r2,S,a,Y)Λmandatory_qualification_M_p(r2,M,t)Λex_cooperation(r1,r2)Λhas_security_awareness(A2,h)Λtrust(A2,r1)
- attack(responsibility,r1,A2,a) ~ play(A2,r2) \(\text{play}(\text{attacker,r1} \) \(\text{(scene(r2,h)} \) \(\text{vscene(r2,l)} \) \(\text{uncertain_constraint(r1,a)} \) \(\text{mandatory_disqualification_S_p} \) \((r2,S,a,Y) \(\text{mandatory_disqualification_M_p(r2,M,t)} \) \(\text{vex_cooperation(r1,r2)} \) \(\text{has_security_awareness(A2,h)} \) \(\text{trust(A2,r1)} \)
- attack(responsibility,r1,A2,a)←play(A2,r2) ∧ play(attacker,r1) ∧ (scene(r2,h) vscene(r2,l)) ∧ uncertain_constraint(r1,a) ∧ (mandatory_S_p(r2,S,a,Y) vman datory_qualification_S_p(r2,S,a)) ∧ (mandatory_M_p(r2,M,t,Y) vmandatory_qualification_M_p(r2,M,t)) ∧ ex_cooperation(r1,r2) ∧ (has_security_awarene ss(A2,l) vhas security_awareness(A2,m)) ∧ trust(A2,r1)

Distraction

- attack(distraction,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧(scene(r2,h)vs cene(r2,l))∧ownership(r2,a)∧mandatory_S_n(r1,S,a,Y)∧has_security_awar eness(A2,h)
- attack(distraction,r1,A2,a)—play(A2,r2) \(\triangle \) play(attacker,r1) \(\triangle \) scene(r2,h) \(\triangle \) wnership(r2,a) \(\triangle \) mandatory_disqualification_S_n(r1,S,a) \(\triangle \) has_security_aw areness(A2,h)
- attack(distraction,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)∧o wnership(r2,a)∧mandatory_disqualification_S_n(r1,S,a)∧has_security_aw areness(A2,h)
- attack(distraction,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land (scene(r2,h) \lor s cene(r2,l)) \land ownership(r2,a) \land mandatory_S_n(r1,S,a,Y) \land has_security_awar eness(A2,m)

- attack(distraction,r1,A2,a)—play(A2,r2) \(\triangle \) play(attacker,r1) \(\triangle \) scene(r2,h) \(\triangle \) o wnership(r2,a) \(\triangle \) mandatory_disqualification_S_n(r1,S,a) \(\triangle \) has_security_aw areness(A2,m)
- attack(distraction,r1,A2,a)←play(A2,r2)∧play(attacker,r1)∧scene(r2,l)∧o wnership(r2,a)∧mandatory_disqualification_S_n(r1,S,a)∧has_security_aw areness(A2,m)
- attack(distraction,r1,A2,a) \leftarrow play(A2,r2) \land play(attacker,r1) \land (scene(r2,h) \lor s cene(r2,l)) \land ownership(r2,a) \land (mandatory_qualification_S_n(r1,S,a) \lor mand atory_S_n(r1,S,a,Y)) \land has_security_awareness(A2,l)